The Brookings Institution

Metropolitan Policy Program
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The Benefits of High Density Development and the Implications for Florida

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Economic and Fiscal Benefits of Density

I The Reality Check: Greater density is necessary in order to accommodate projected future population growth

II Good News 1: Today's demographic and market changes favor more housing choices and quality, dense development

III Good News 2: Academic research demonstrates that dense, compact development yields both economic and fiscal benefits

IV However, despite the opportunity and benefits, the progress to create more quality, dense development is mixed

V Implications

I

<u>The Reality Check</u>: Greater density is necessary in order to accommodate projected future population growth

The opportunity: We can still better capture and accommodate future growth

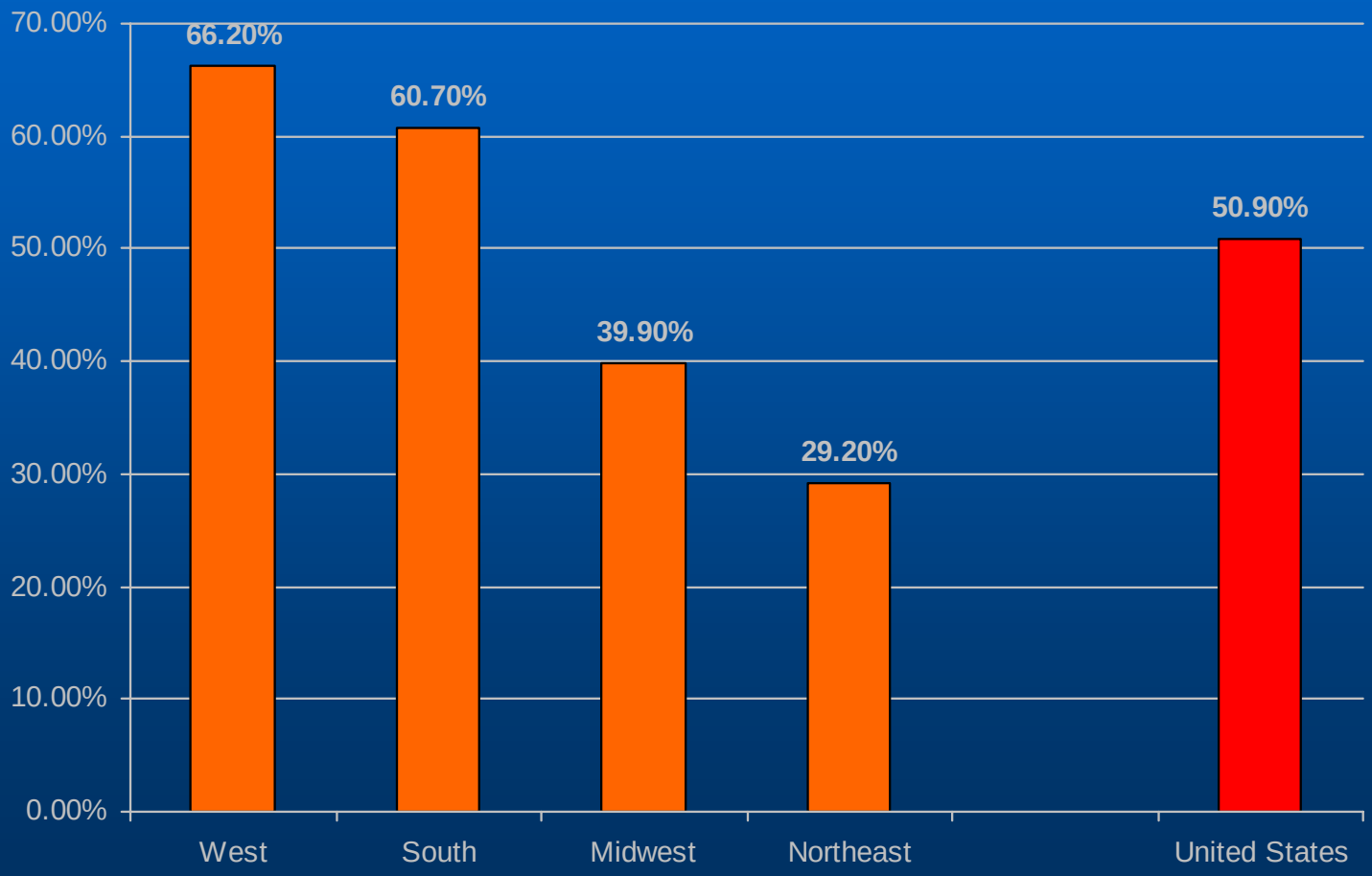
- By 2030, the nation will need a total of approximately 427 billion square feet of built space to accommodate growth projections.
- By 2030, about half of the buildings in which Americans live, work, and shop will be built after 2000.

- Source: Arthur C. Nelson, 2005

The West and South will have the highest demand for total building units between 2000 and 2030

Percent new units built after 2000 (2000-2030)

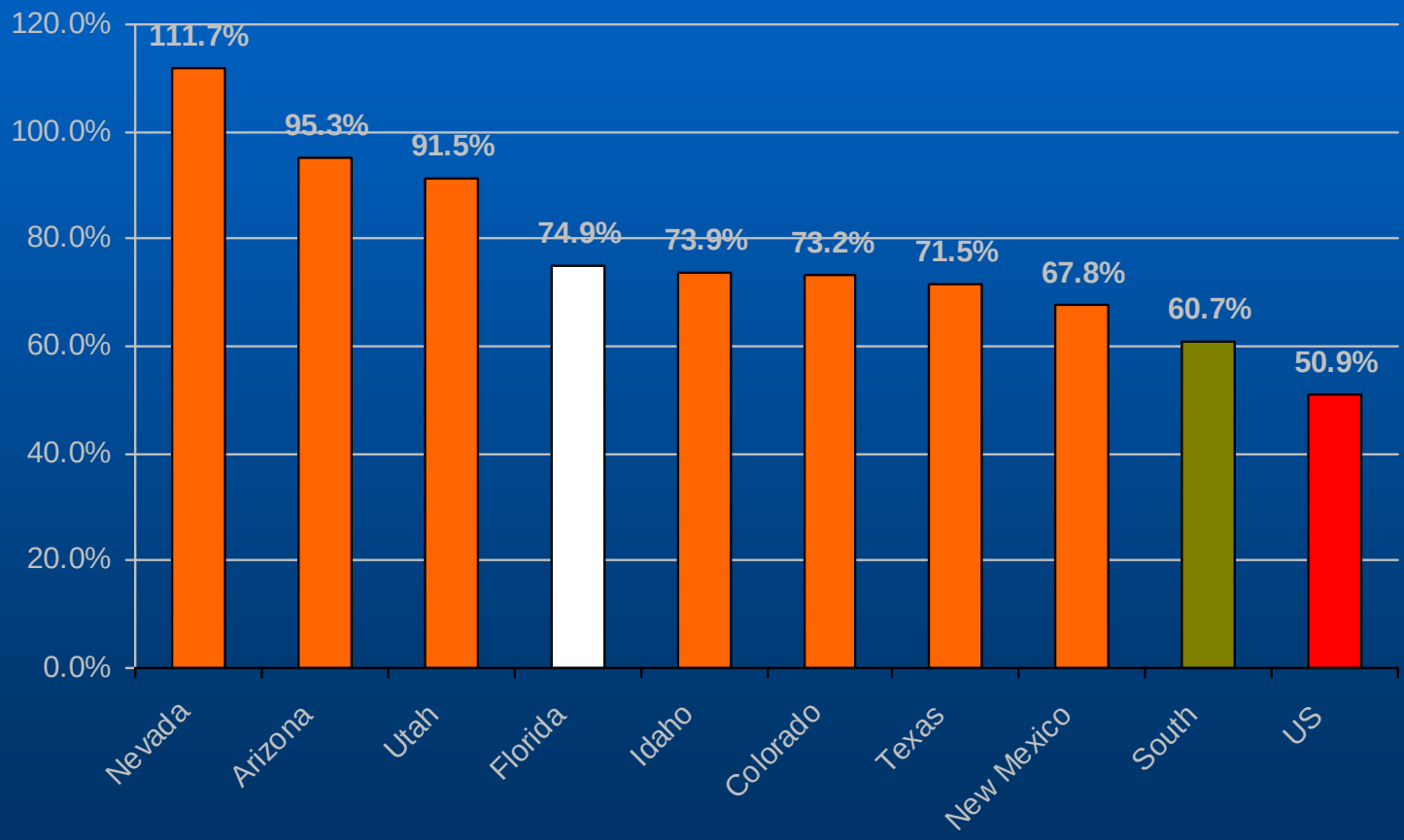
Source: Nelson, "Toward a New Metropolis: An Opportunity to Rebuild America" (2004)



Florida is ranked 4th among the fifty states in experiencing the fastest demand for new units in the next 24 years

Percent new units built after 2000 (2000-2030)

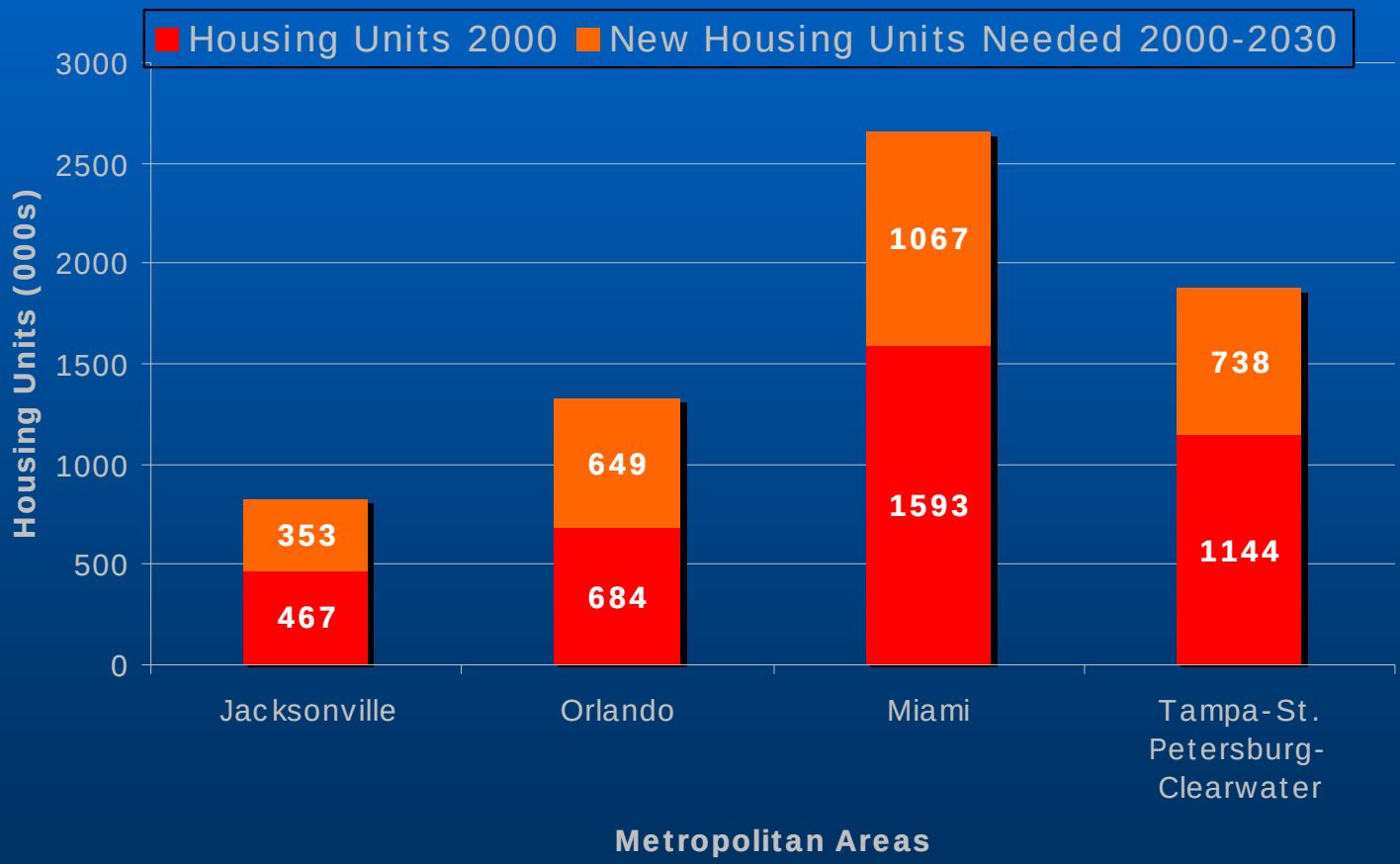
Source: Nelson, "Toward a New Metropolis: An Opportunity to Rebuild America" (2004)



By 2030, the Miami area will need the highest number of new housing units to accommodate projected growth…

Demand for Housing Units 2000-2030

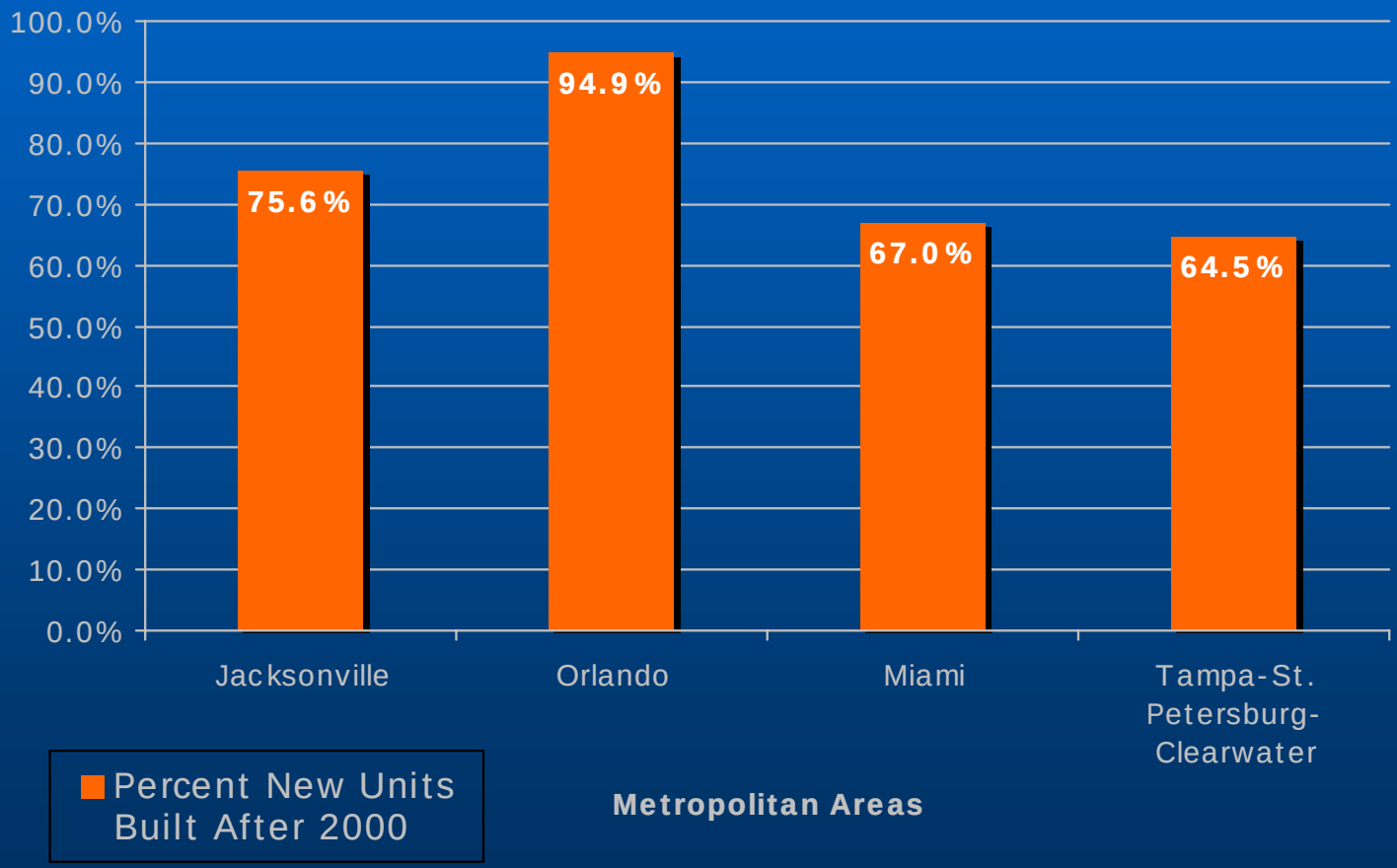
Source: Nelson, "Toward a New Metropolis: An Opportunity to Rebuild America" (2004)



…but the Orlando metro area will see its demand for housing nearly double

Demand for Housing Units 2000-2030

Source: Nelson, "Toward a New Metropolis: An Opportunity to Rebuild America" (2004)



In short, the population squeeze is on

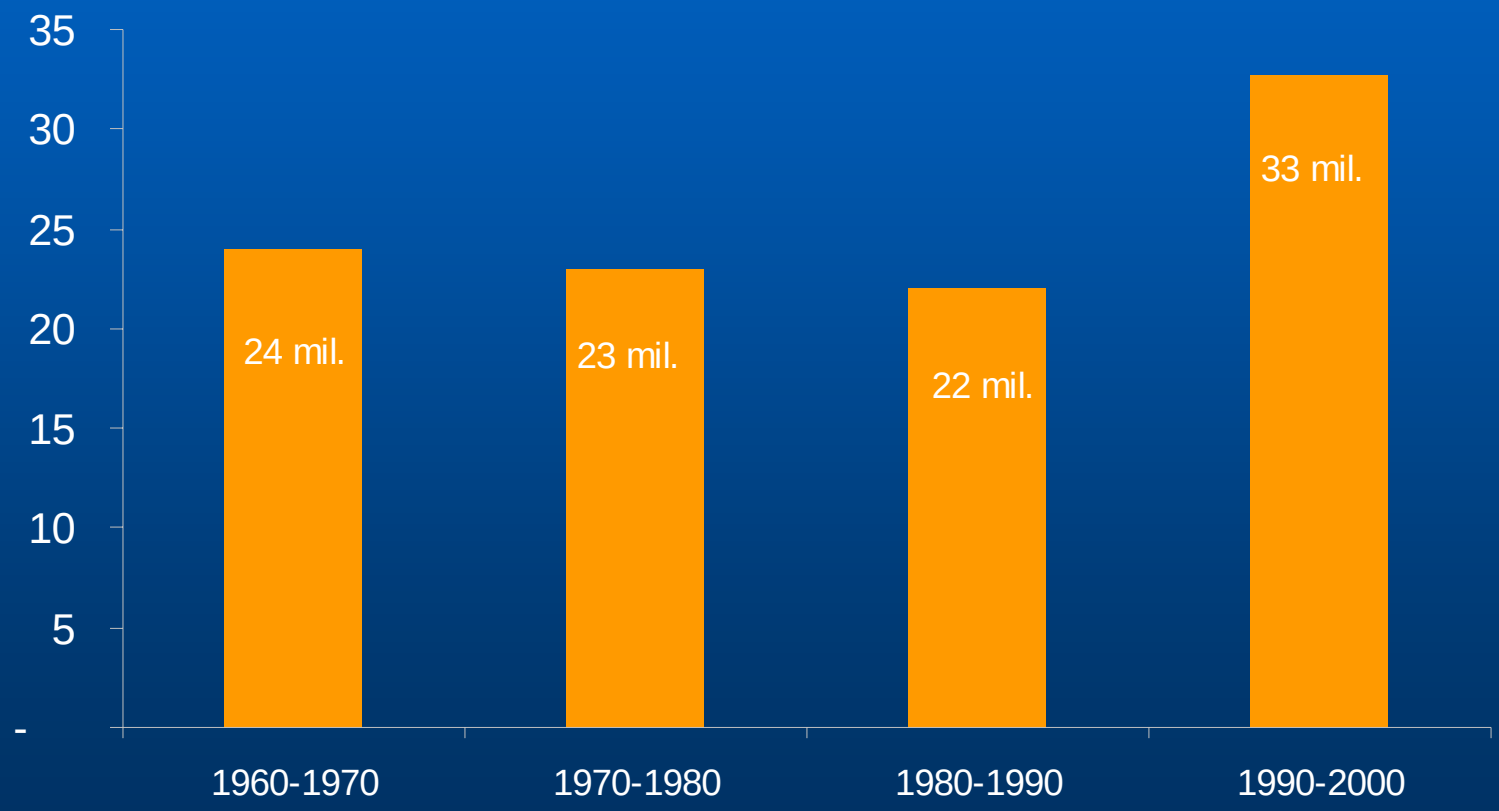
II

<u>Good News 1</u>: Today's demographic and market changes favor more housing choices and quality, dense development

U.S. has experienced population growth every decade since 1960 but that growth accelerated in the 1990s, reaching 281 million persons by 2000

Change in Millions of persons

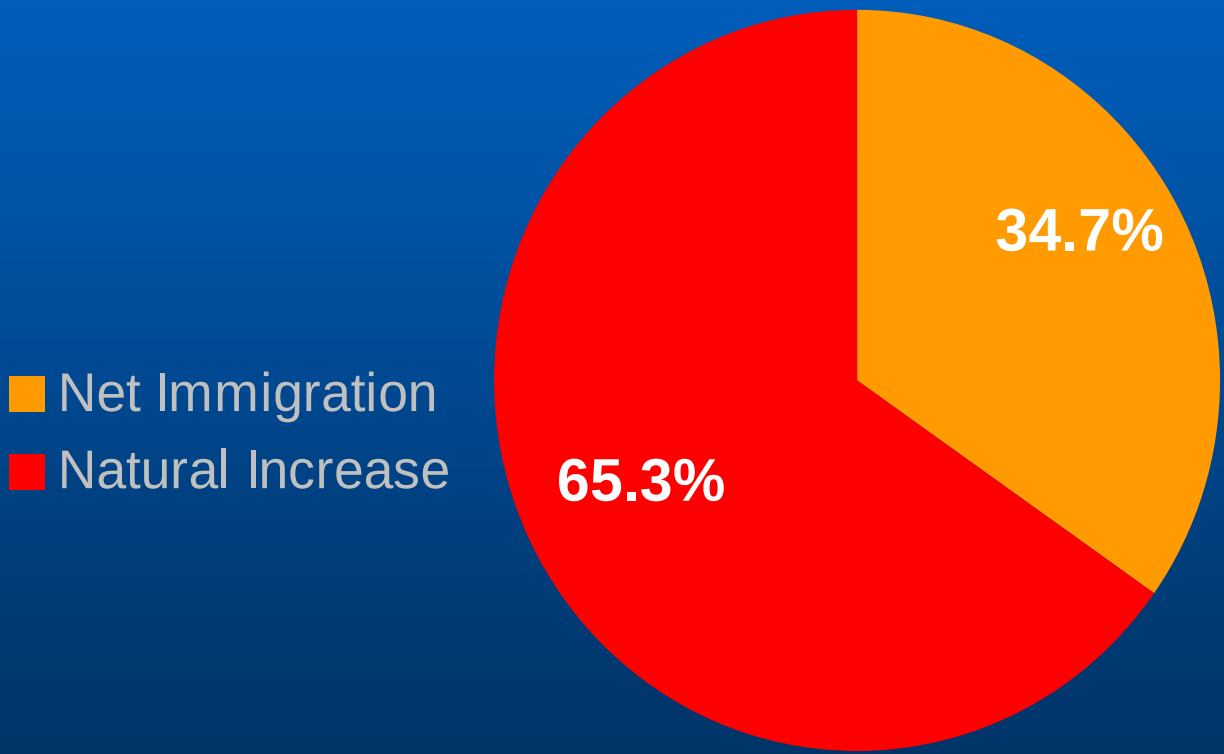
Source:
U.S. Census Bureau



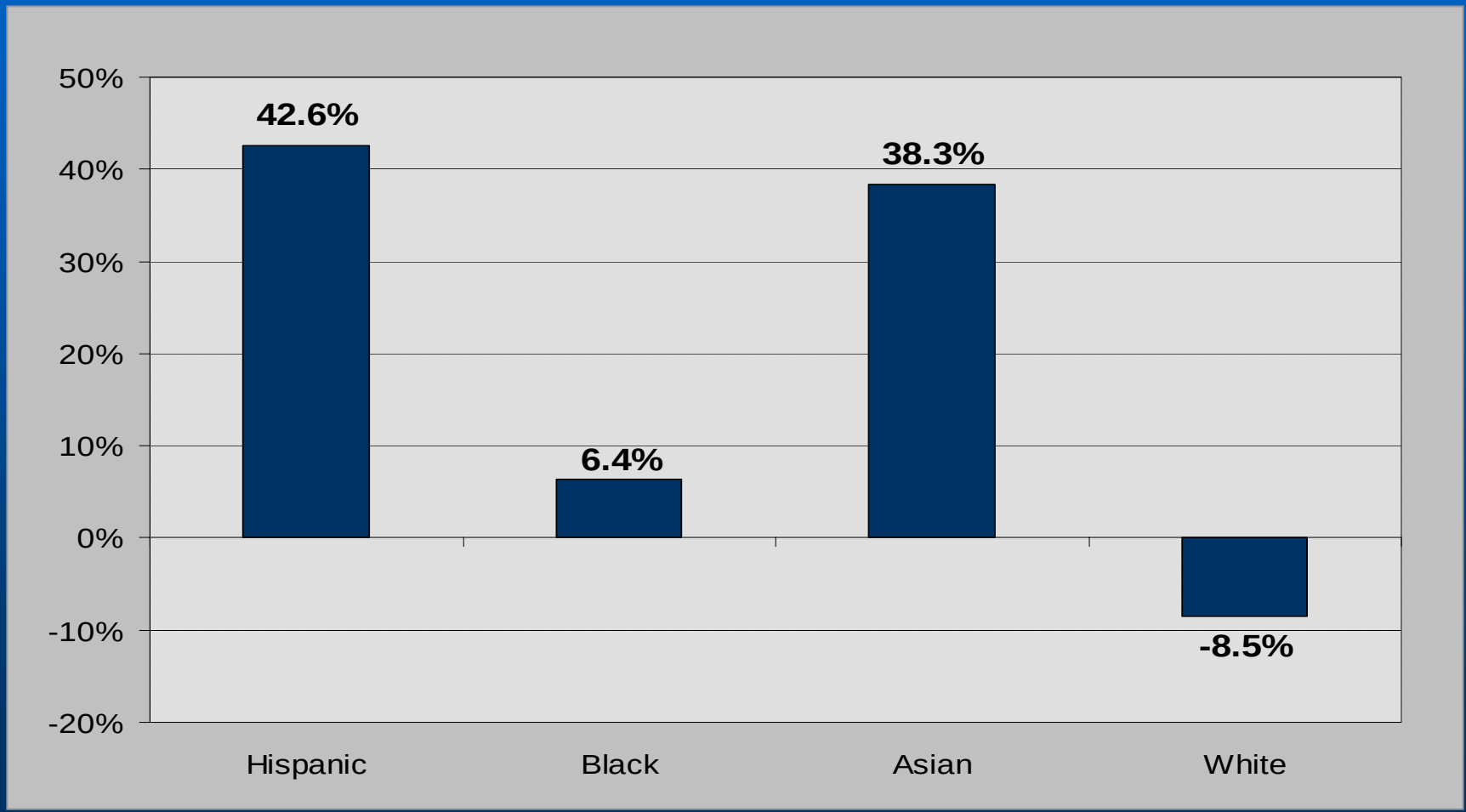
Immigration explains a large portion of this population growth

Components of population change, 1990-2000

Source:
U.S. Census Bureau



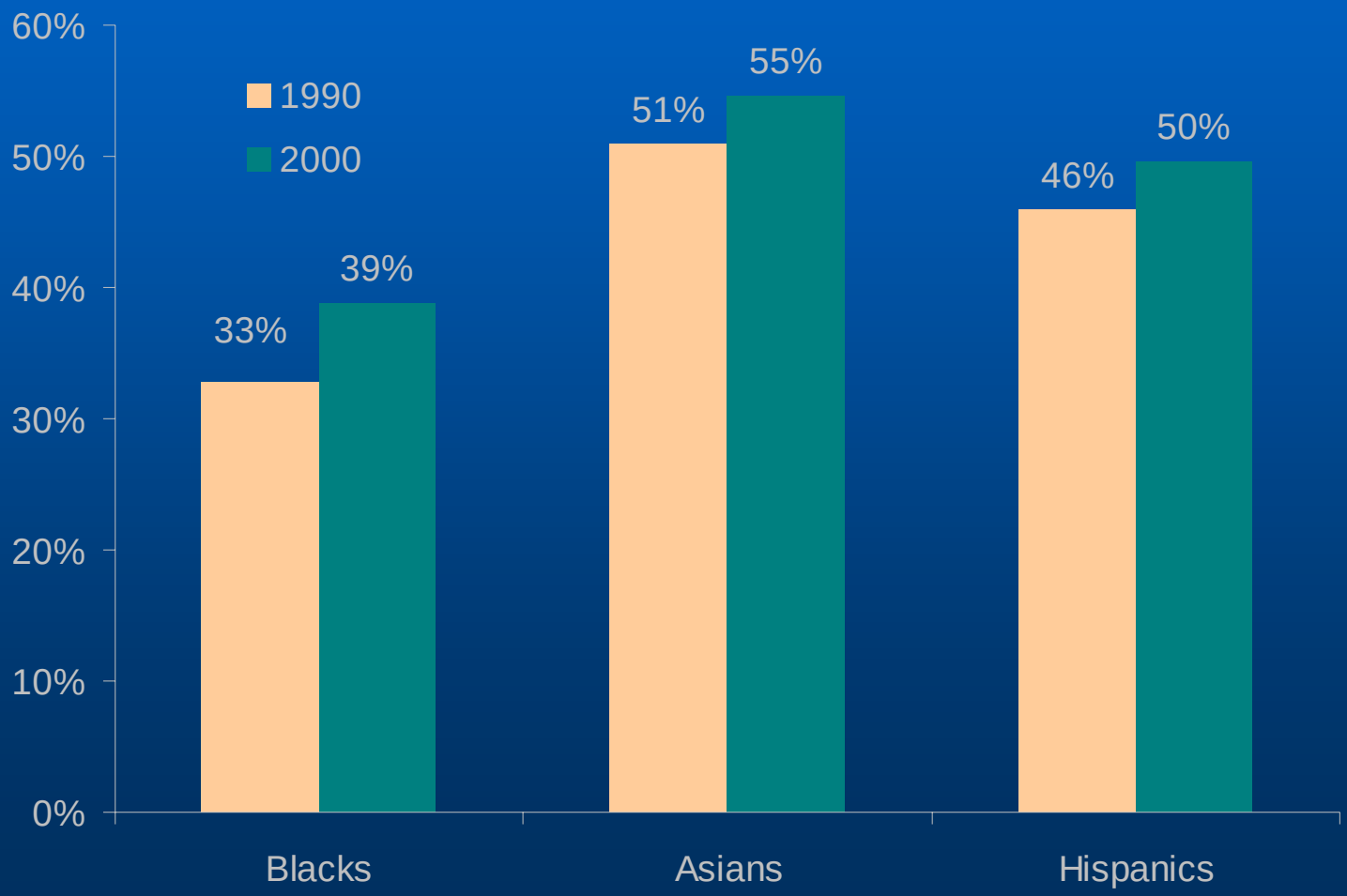
In fact, new Asians and Hispanics fueled central city growth in the 1990s



But suburbs also diversified; the share of each racial/ethnic group living in the suburbs increased substantially

Share of population by race and ethnicity, 1990-2000

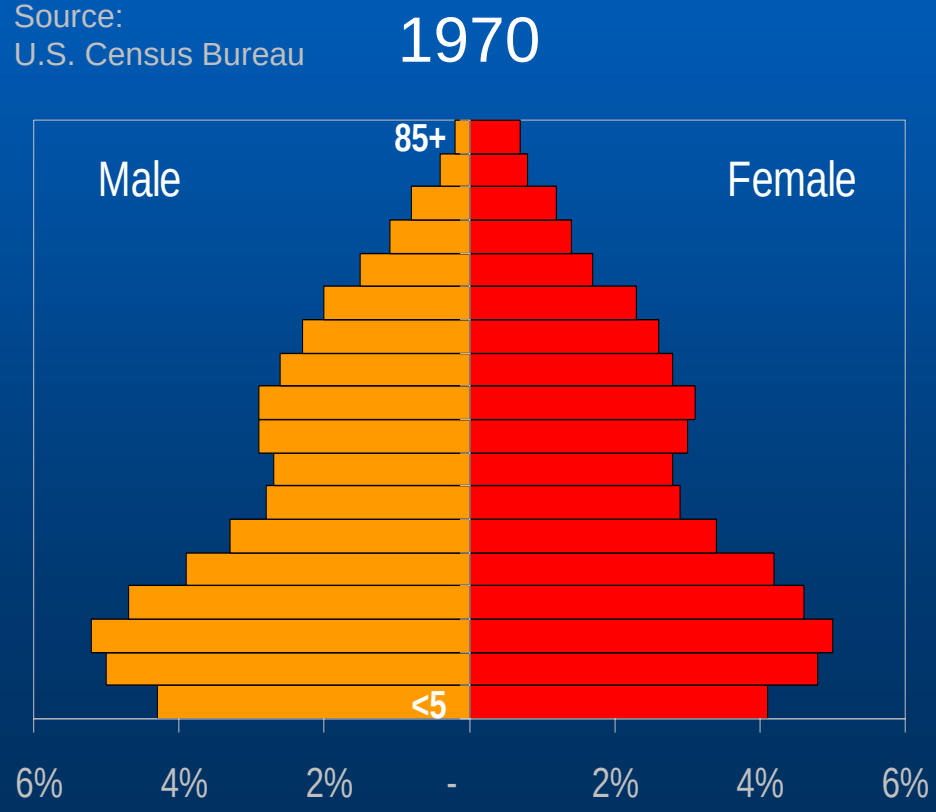
Source:
U.S. Census Bureau

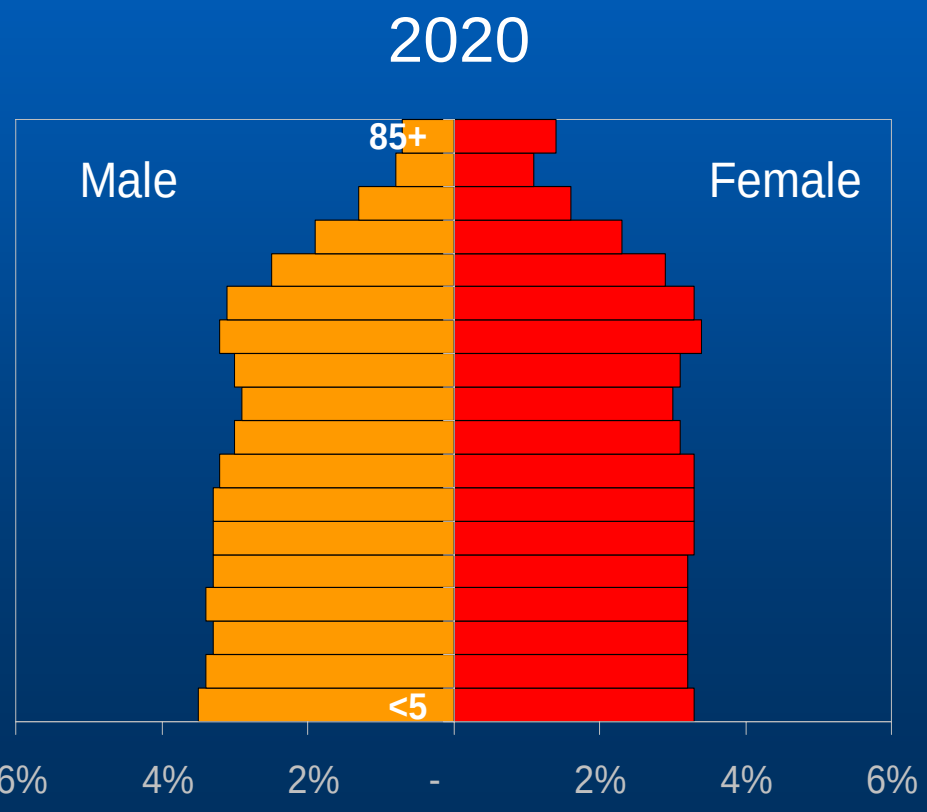


As America grows it is also aging

Share of Population in Age Groups

Source:
U.S. Census Bureau

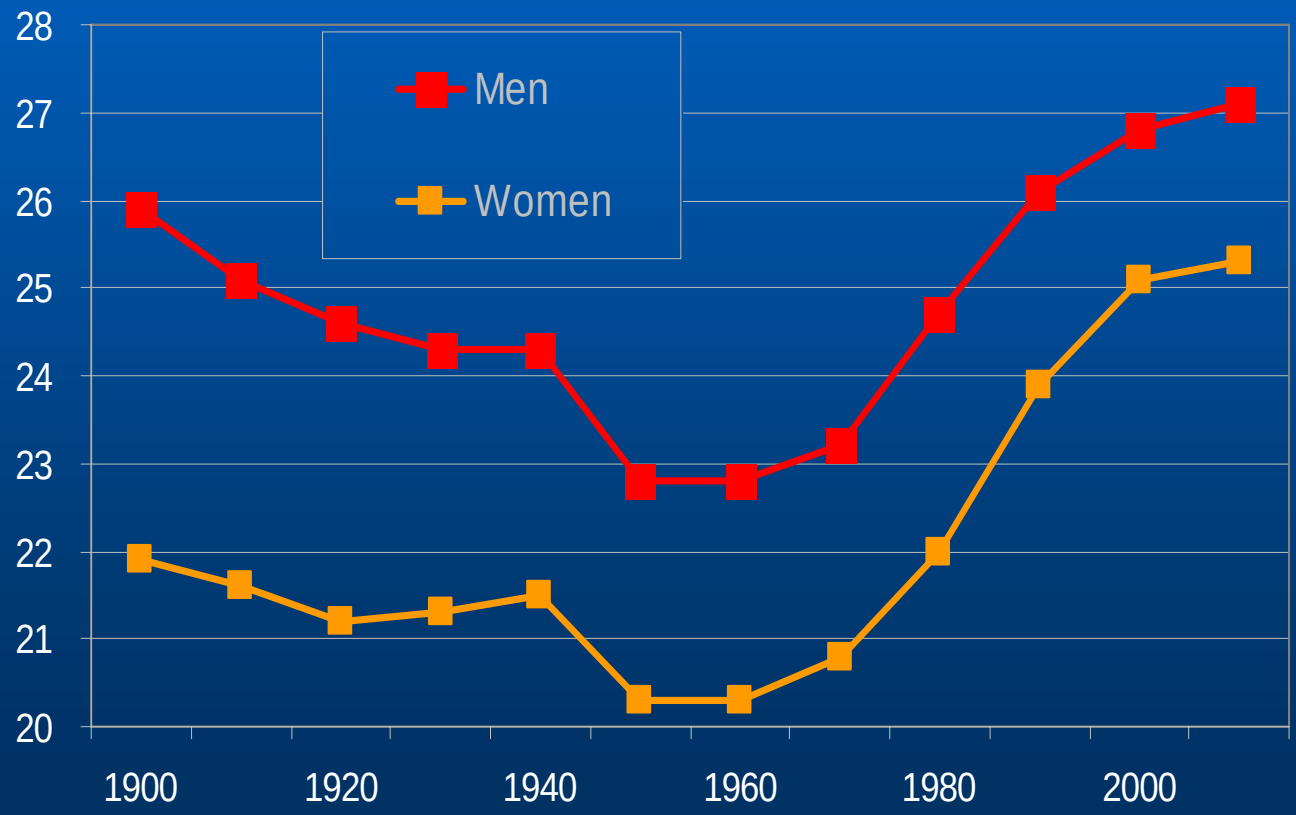




Household formation is also changing: Men and women are delaying marriage…

Median Age at Marriage

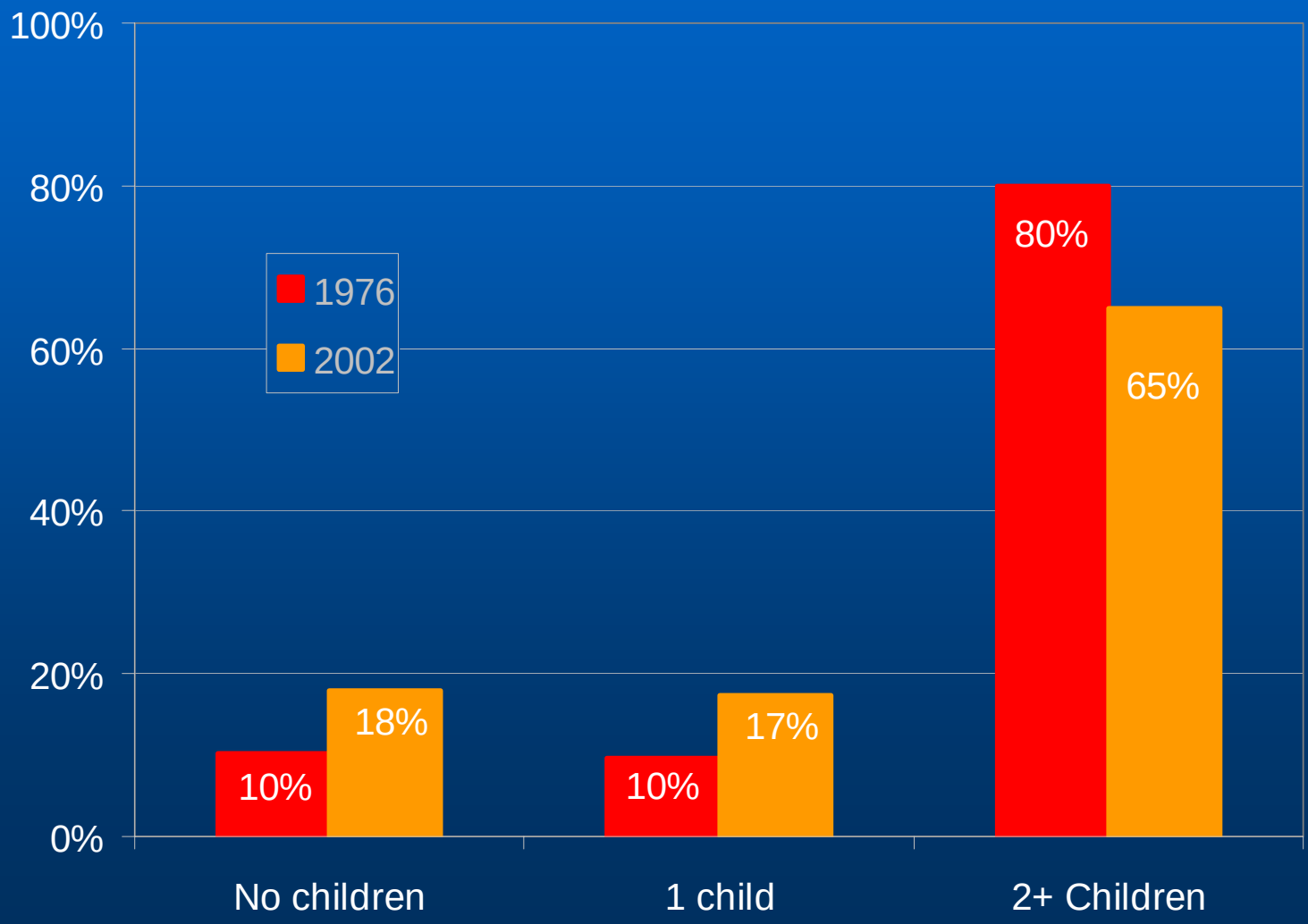
Source: U.S. Census Bureau



…and families are having fewer children

Births Ever to Women Age 40-44

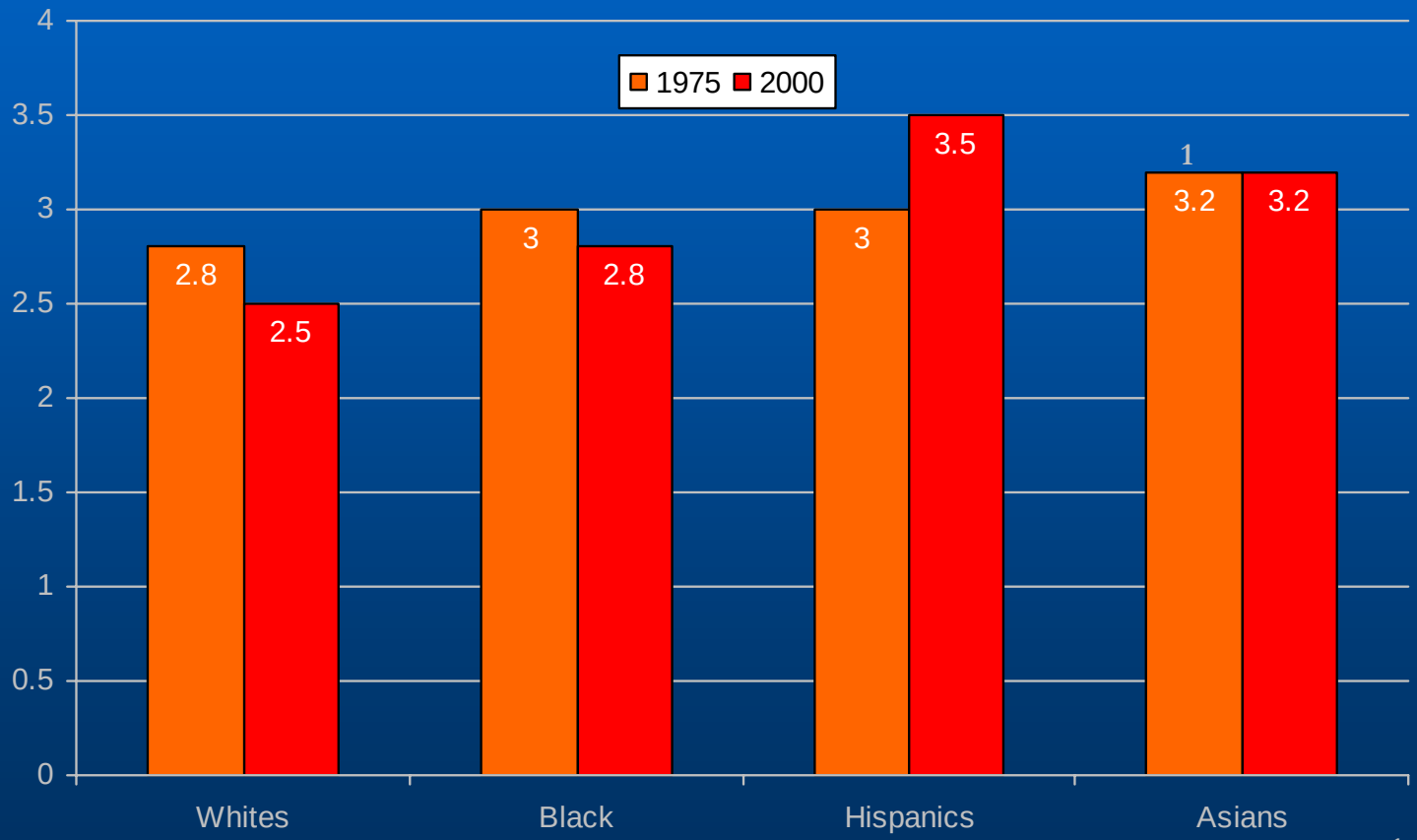
Source: U.S. Census Bureau



Household size is shrinking, at 2.6 persons today, but it is not for Hispanics and Asians

Average Household Size 1975 & 2000

Source: U.S. Census Bureau



[1] 1990

Source: U.S. Census Bureau

The combination of these trends means that the traditional nuclear family is no longer the norm

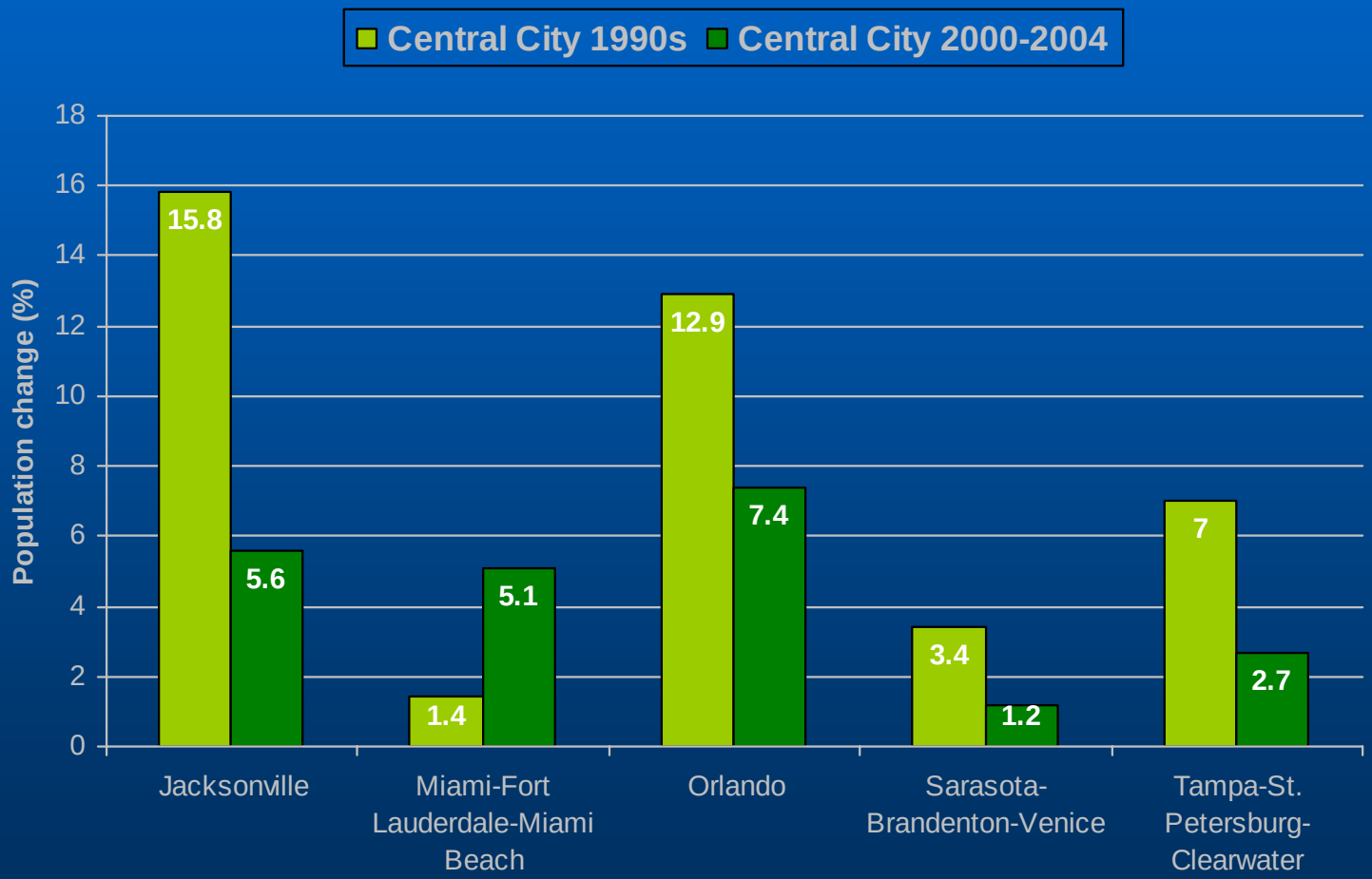
	1990	2000	2020
Families w/ children	36.6%	32.8%	28.2%
Families w/o children	33.7%	35.3%	39.7%
Married couples w/ child.	26.9%	23.5%	20.3%
Married couples w/o child.	28.4%	28.1%	32.1%
Singles	25.0%	25.8%	27.3%

Source: U.S. Census Bureau

In Florida, similar population shifts can be found: the largest cities in the state grew in the 1990s and continued to do so in the last four years

Population Change in Florida, 1990-2000 and 2000-2004

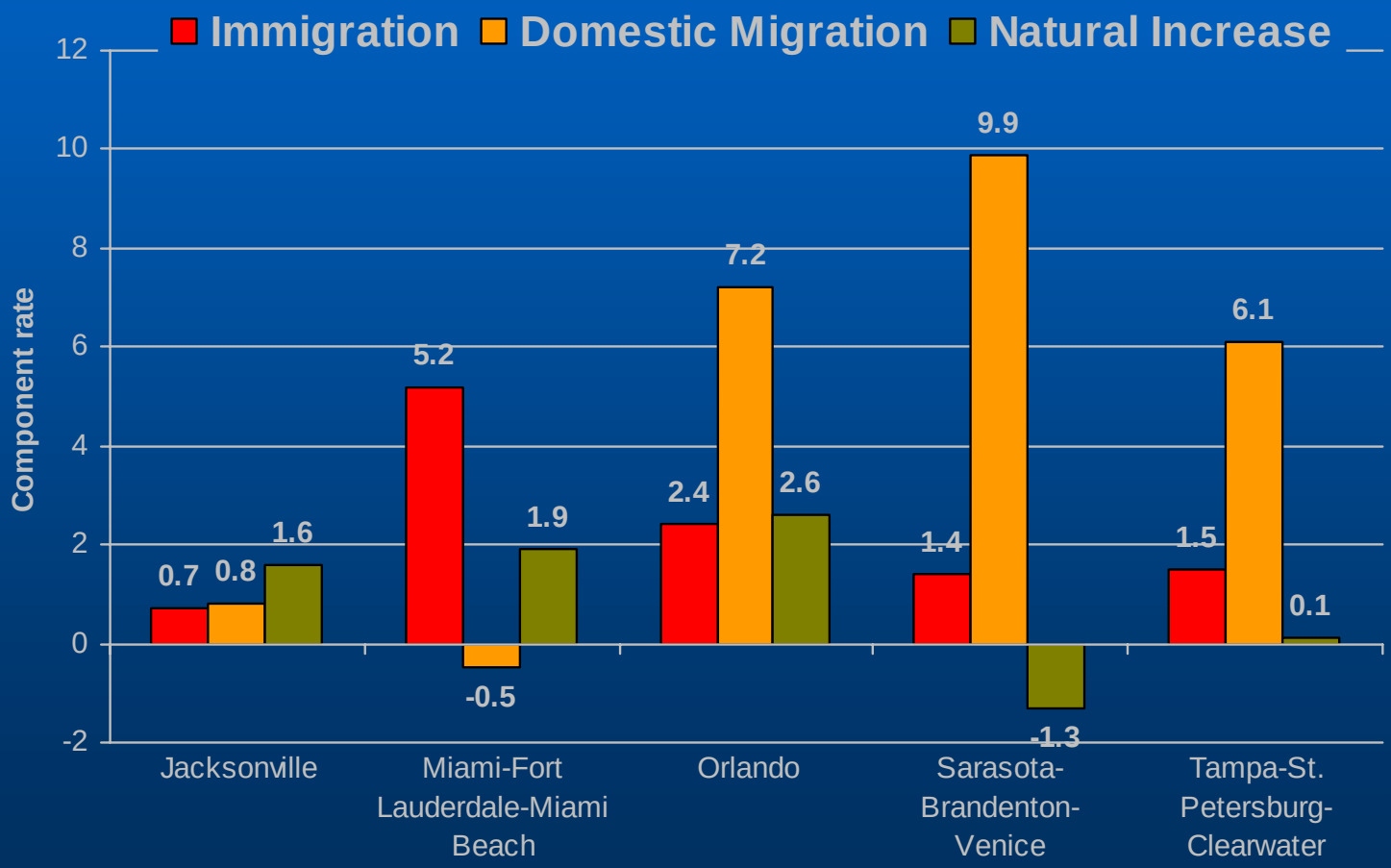
Source:
William H. Frey, "Metro America in the New Century" (2005)



Domestic migration, not natural increase, fueled the growth of most of Florida's major metropolitan areas between 2000 – 2004; the exception is Miami

Components of Population change 2000-2004

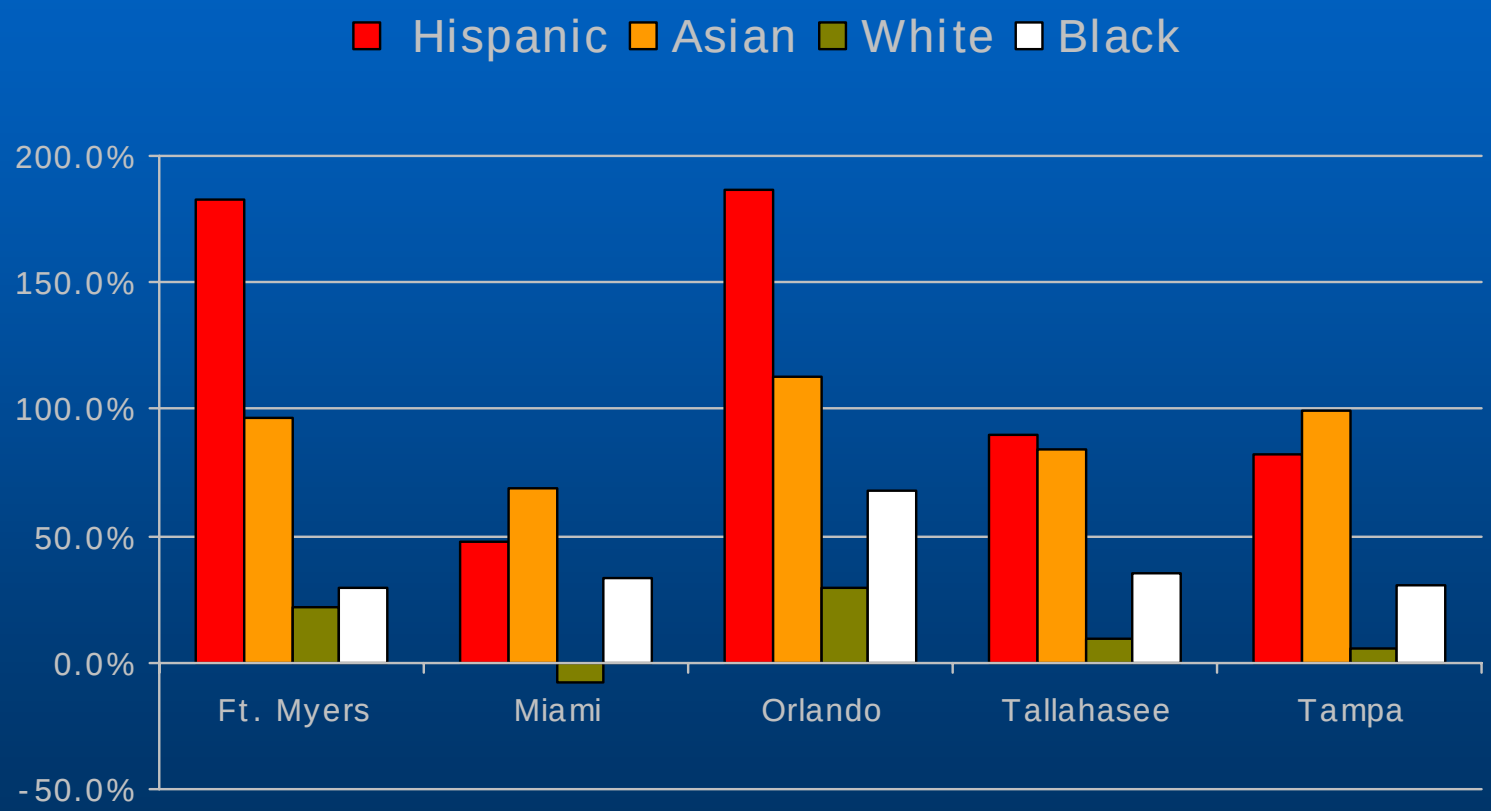
Source:
William H. Frey, "Metro America in the New Century" (2005)



Asians and Hispanics also fueled growth in major Florida metropolitan areas during the 1990s

Percent change in population by race and ethnicity, 1990-2000

Source:
U.S. Census Bureau



Finally, economic shifts -- the shift to a knowledge economy -- is placing greater reliance on highly-educated and highly-skilled workers people

- Ideas, innovation, and creativity now drive the economy

- Success requires large numbers of people with a college education and high skills

The bottom line: these demographic and market changes give cities and suburbs a chance to compete for new residents and their consumption

- Young professionals
- Childless couples
- Baby-boomers
- New immigrants
- Empty nesters
- Elderly individuals
- High end service jobs

III

<u>Good News 2</u>: U.S. research increasingly finds that density yields economic and fiscal benefits

Economic competitiveness is enhanced by concentrations of firms and people

Higher labor productivity

Enhanced innovation

Concentration of employment contributes to productivity

Average labor productivity increases with more employment density

- Doubling employment density increases average productivity by around six percent
- Workers in the ten states with the lowest employment densities produced 25% less annual output value than the ten states with the highest employment densities

Ciccone and Hall (1996)

Concentration of employment enhances innovation

Higher employment density has been linked to increased innovation

- External economies are generated by the interactions among educated and experienced people

Jacobs (1969)

- For every doubling of employment density, the number of patents per capita increase, on average, by 20 to 30 percent

Carlino (2001)

Moreover, educated workers are drawn to places with:

- Vibrant and distinctive downtowns
- Plentiful amenities
- Positive, tolerant culture
- Thick job market

Concentration of human capital contributes to productivity

More educated workers enhance productivity

- Each additional year of education for a worker in a metro area leads to a 2.8 percent increase in productivity

Rauch (1993)

Concentration of human capital fuels income growth

Cities and metros with highly skilled workers have higher income growth

- The most highly educated metro areas have per capita incomes about 20 percent higher than average while the least educated metros have per capita incomes about 12 percent below average

Gottlieb and Fogarty (2003)

- A one percentage point increase in the college-educated population of a metro area raises everyone else's average wages by .6 to 1.2 percent

Moretti (2004)

Finally, well-designed growth produces economic benefits

Growth management metros were more likely to see improvements in metropolitan level personal income than other metros

Nelson and Peterman (2000)

"Accessible" cities with efficient transportation systems had higher productivity than more dispersed places (47 metro areas)

Cervero, 2000

Furthermore, 50 years of research confirm that sprawl has costs

Low density development increases cost of infrastructure:

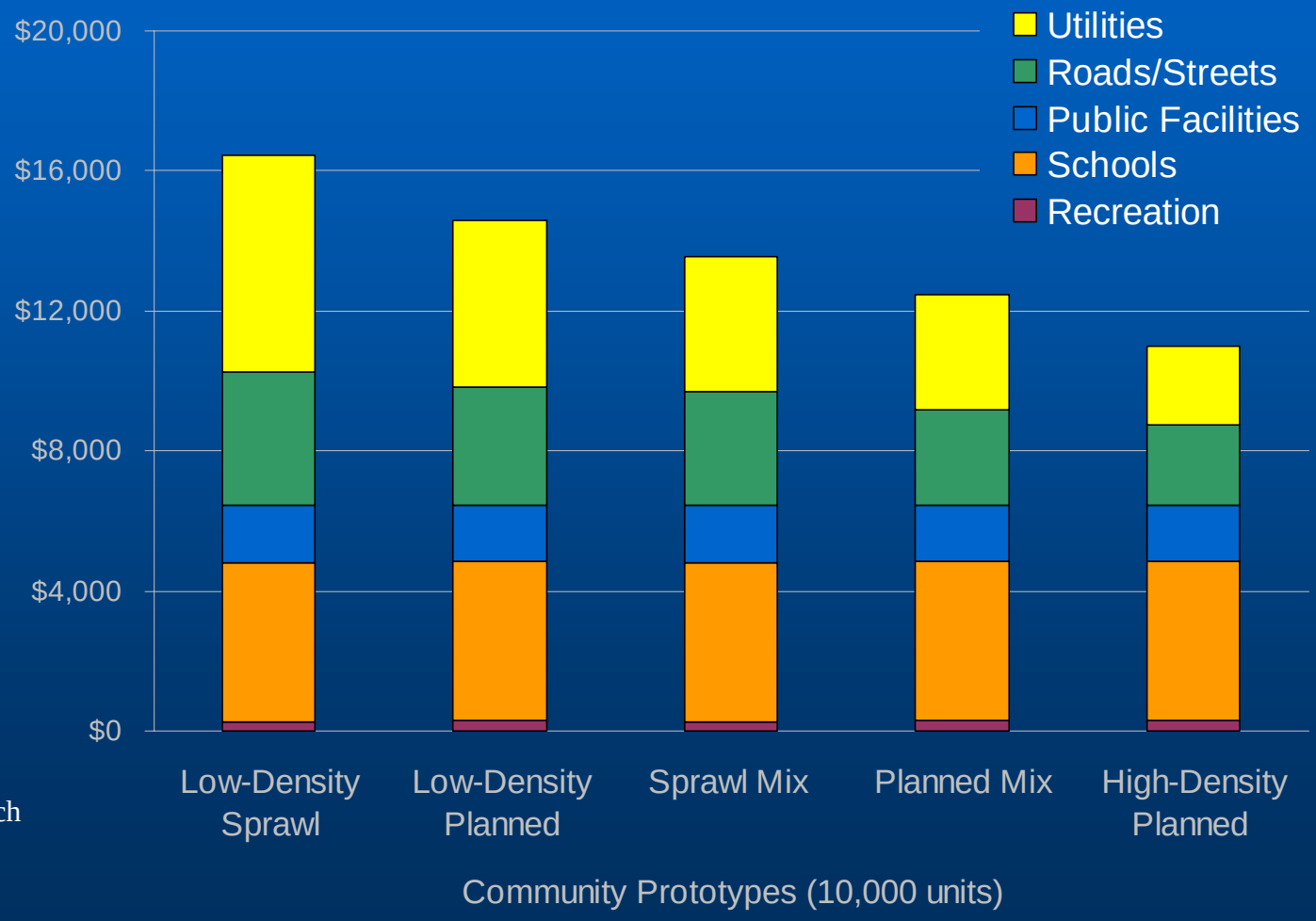
- Utilities
- Roads
- Streets

Low density development increases the costs of key services:

- Police
- Fire
- Emergency medical

Planned and high-density developments experience greater capital costs savings, esp. from road and water infrastructure

Estimated cost savings by community prototype



Source: Real Estate Research Corporation (1974)

A more recent 1989 study in Florida showed that the costs for providing infrastructure per dwelling unit is lowest and most efficient for more compact developments

Efficiency Rank	Study Area	Urban Form	Cost
1	Downt'n Orlando	Compact	**$9,252**
2	Southpoint	Contiguous	**$9,767**
3	Countryside	Contiguous	**$12,693**
4	Cantonment	Scattered	**$15,316**
5	Tampa Palms	Satellite	**$15,447**
6	University	Linear	**$16,260**
7	Kendall	Linear	**$16,514**
8	Wellington	Scattered	**$23,960**
Average			**$14,901**

A 2001 study in Kentucky showed that the cost to a family of four to provide services for every 1,000 new residents is less in a more compact county than a decentralized one.

Dollar costs of new services (including police, fire, highway, schools, and solid waste) per 1,000 new residents for a family of 4 in Kentucky

	Development Pattern	Cost
Central city counties		
Fayette	(more concentrated)	($1.08)
Jefferson	(more spread out)	$36.82
Suburban counties		
Shelby	(more concentrated)	$88.27
Pendelton	(more spread out)	$1,222.39
Counties with small towns		
Warren	(more concentrated)	$53.89
Pulaski	(more spread out)	$239.93
Outer ring and rural		
Garrard	(more concentrated)	$454.51
McCracken	(more spread out)	$618.90

Source: Bollinger, Berger, and Thompson (2001)

Industry composition, not just residential development, matters to density

Academic evidence show that certain industries are more compact or sprawl-inducing than others

- **Innovative businesses are urban:** Innovative businesses and activities are most likely to be urban and located in cities

- **Routine means rural**: Activities that are more routine in nature are more likely to be suburban or rural

- **Industries with educated workers are centralized:** Industries that hire college educated workers are often more centralized, located in inner-ring; industries with majority high school graduates are less urban

- **Manufacturing and some retail are land consuming:** Warehousing and distribution, and some service industries -- like big box retail -- are suburban and exurban and land consuming

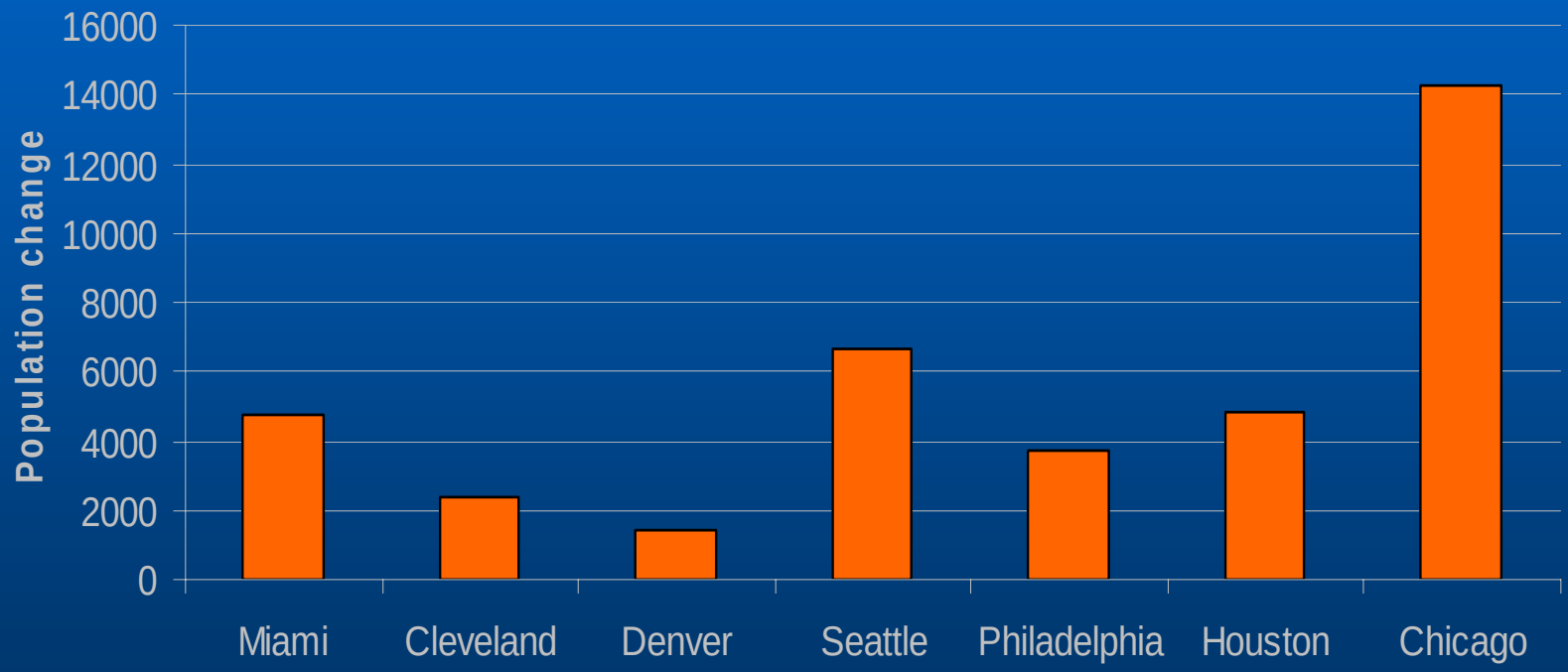
IV

Despite the opportunity and benefits, the progress of creating more dense development is mixed

Changes in demographics and consumer preferences have contributed to the downtown revitalization in cities

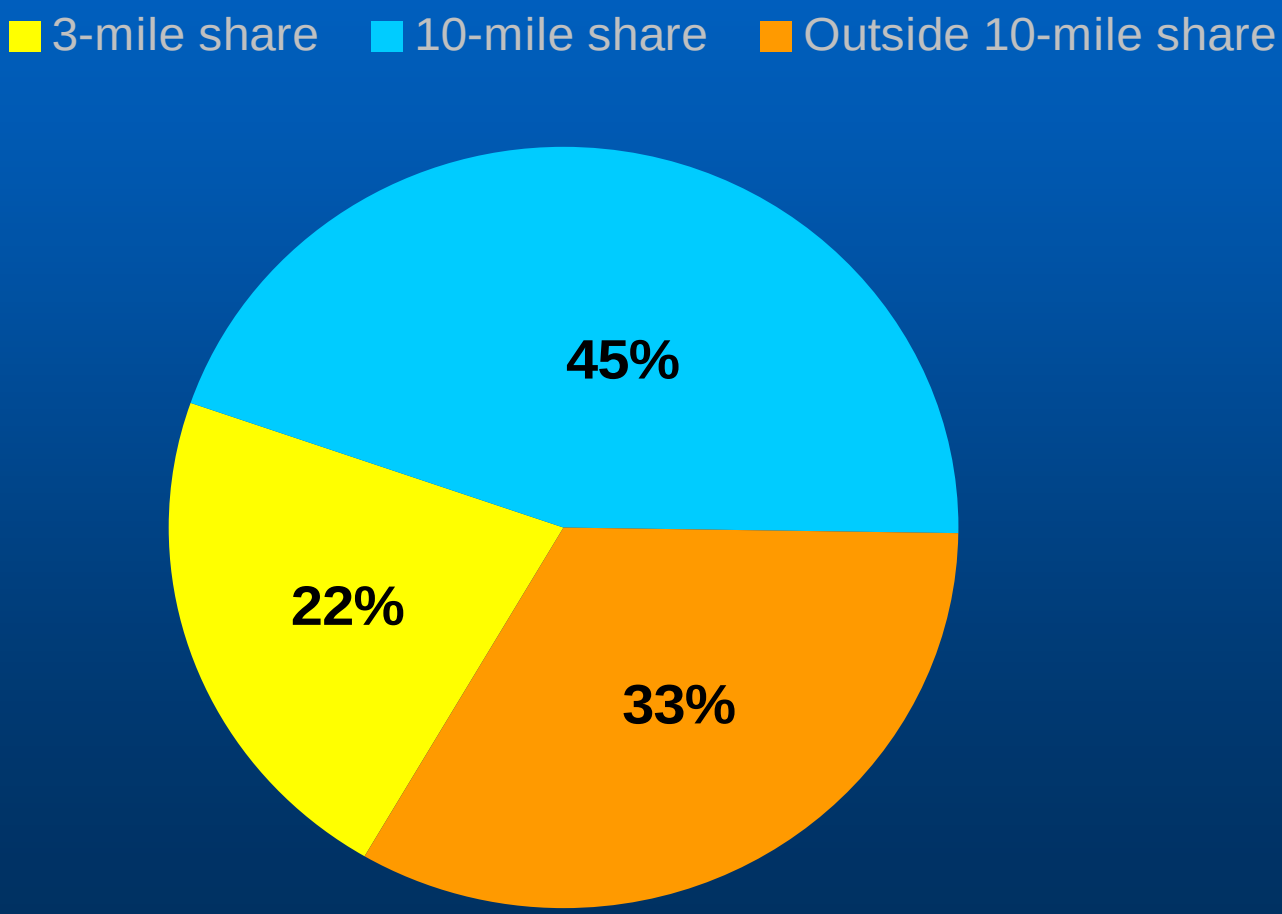
Absolute change in population, 1990-2000

Source: U.S. Census Bureau



However, jobs and people continue to shift to the suburbs. Today, more than 30% of jobs in the top 100 metros are now located 10 miles from downtowns.

Share of metropolitan employment, 100 largest metropolitan areas, 1996



In most of the largest office markets, office space is located in low-density, edgeless locations

Metropolitan Area	% Office Space within Primary Downtown (CDB)	% Office Space within Secondary Downtowns	% Office Space within Edge Cities	% Office Space in Edgeless Locations
Core Dominated				
Chicago	53.9%	-	19.5%	26.6%
New York	56.7%	7.2%	6.2%	29.9%
Balanced				
Boston	37.4%	4.6%	18.8%	39.2%
Washington	28.6%	12.5%	27.1%	31.8%
San Francisco	33.9%	8.8%	13.9%	43.4%
Dispersed				
Dallas	20.5%	4.5%	40.3%	34.6%
Houston	23.0%	-	37.9%	39.1%
Atlanta	23.6%	9.9%	25.3%	41.2%
Edgeless				
Philadelphia	34.2%	3.2%	8.9%	53.6%
Miami	**13.1%**	**4.5%**	**16.6%**	**65.8%**
Average	**37.7%**	**6.0%**	**19.8%**	**36.5%**

Source: Black's Guide (New York Data comes from Cushman & Wakefield and the Real Estate Board of New York)

Due to rapid suburbanization, density has dropped across all regions in the U.S. between 1982 and 1997

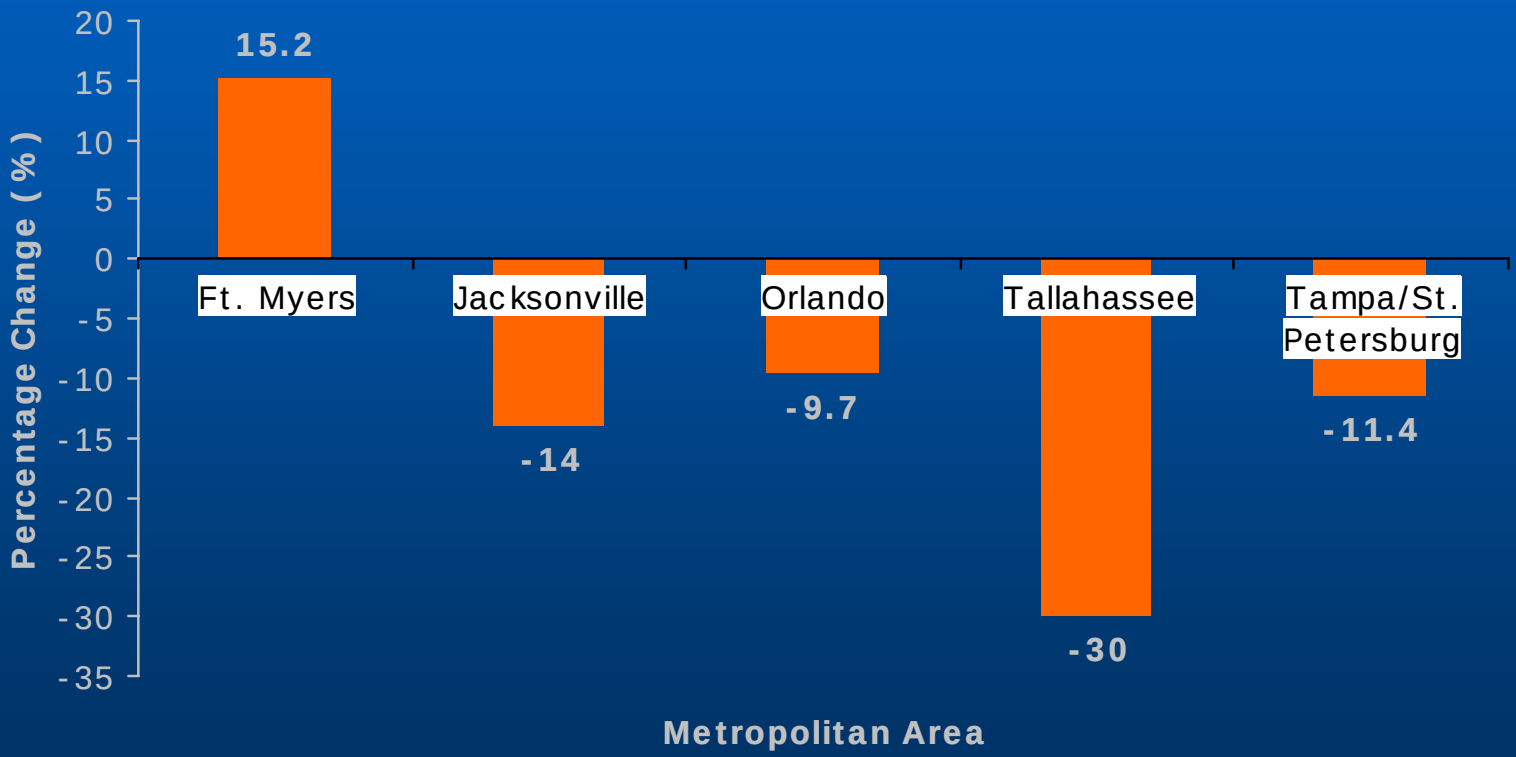
	Density		
	1982	1997	Percent Change
Northeast	5.87	4.51	-23.1%
South	3.68	2.82	-23.4%
Midwest	4.19	3.39	-19.0%
West	5.46	4.85	-11.2%
United States	4.46	3.55	-20.5%

Source: Fulton and others, "Who Sprawls Most? How Growth Patterns Differ Across the U.S."

Densities also declined in Florida's major metropolitan areas during the same period, the exception is Ft. Myers

Change in persons per urbanized land, 1985-1997

Source: Fulton and others, "Who Sprawls Most? How Growth Patterns Differ Across the U.S (2001)



Further, cities are not capturing favored household types

	Central City	Suburbs
All Households	33%	67%
All Households w/o Children	29%	71%
** Married couples w/o children	26%	74%
** Married couples w/ children	26%	74%
All Singles	40%	60%
** Non-elderly singles	43%	56%

Source: U.S. Census Bureau, 2000
* For the 102 largest metro areas

And cities are not winning the bulk of key age groups

	Central City	Suburbs
Professional Singles (non family, age 25-44)	**44.4%**	**55.6%**
Empty Nester Couples (family, age 45-64)	**27.3%**	**72.7%**

Source: U.S. Census Bureau 2000
* For the 102 largest metro areas

V Implications

What do these findings mean for embracing density in Florida?

- ✓ Given growth pressures, density is critical if you want to preserve resources, parks and open space
- ✓ Density, if done poorly, can drive up housing prices or tilt toward the high-end of the market (so can low-density dev)
    - nationally, we're seeing a loss of middle-class neighborhoods
- ✓ If done right, density can make room for greater housing choice, housing types, and housing price variations
- ✓ Quality, dense development is not always 100% residential – market is demanding mixed-use development; town-centered development, anchor-based development

“If we do not change our direction,
we are likely to end up where we are headed.”

- Ancient Chinese proverb

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